

# CHAPTER NINE: WATER MANAGEMENT ASSISTANCE

## **9.1 INTRODUCTION**

The Water Management Assistance Program (WMA) is intended to provide financial and technical resources to assist water users in the development and implementation of conservation programs, facilitate augmentation and renewable water supply utilization, and obtain information on hydrologic conditions and water availability in the Pinal Active Management Area (PAMA) (A.R.S. § 45-567(A)(5); A.R.S. § 45-567(A)(7)).

The WMA is funded primarily from groundwater withdrawal fees collected from each person withdrawing groundwater in an Active Management Area (AMA) from a non-exempt well (A.R.S. § 45-611(C)). Withdrawal fees are authorized by the *1980 Groundwater Code* (Code), and are levied based on the acre-foot volume of groundwater withdrawn on an annual basis. The groundwater withdrawal fee rate for augmentation of the water supply, conservation assistance to water users within the AMA, and monitoring and assessing water availability within the AMA, is set annually by the Director, with input from the PAMA Groundwater Users Advisory Council (GUAC), and is limited to a maximum of two dollars per acre-foot per year (A.R.S. § 45-611(A)(2)).

## **9.2 DESCRIPTION**

Programs funded by the WMA help water users achieve efficient use of water supplies and help the PAMA meet its water management goal. The water management goal of the PAMA is to preserve existing agricultural economies in the AMA for as long as feasible while preserving future water supplies for non-irrigation purposes.

### **9.2.1 Conservation Assistance**

Conservation assistance helps water users plan and undertake conservation programs and lessens the number of enforcement actions related to conservation requirements. It is used for information and education services, including services that increase public awareness about the importance of water conservation and the PAMA's groundwater supplies. It also provides technical support designed to increase water use efficiency across the PAMA. Conservation assistance supports the Arizona Department of Water Resources' (ADWR) role as a central source for information on water conservation, augmentation, and recharge.

### **9.2.2 Augmentation**

Augmentation supplements the water supply of an AMA and includes water importation, water storage, and artificial recharge (A.R.S. § 45-561(2)). Augmentation assistance helps water users study renewable resource options, design and construct renewable resource facilities, and provides information to resolve technical feasibility challenges or to optimize recharge project operation. It also includes studies initiated or conducted by ADWR, cost sharing grants for augmentation projects, studies initiated or conducted by others, and planning and technical support for AMA-wide and local area water management strategies.

### **9.2.3 Monitoring and Assessing Water Availability**

Monitoring and water availability assessment activities provide information and data that are useful for developing strategies for achieving the PAMA water management goal, while also taking localized hydrologic conditions into account in the PAMA. Examples of the information and data that can be obtained through monitoring and assessment activities include the following:

- Groundwater movement and volumes
- Locations of recharge and depletions
- Location and migration of poor quality groundwater

- Impact of continued groundwater pumping, including water level declines and land subsidence
- Stream flows, snowmelt and precipitation data.

#### 9.2.4 Pinal County Water Augmentation Authority (PCWAA)

Any WMAP funds not allocated during the calendar year may be used to fund the Pinal County Water Augmentation Authority (PCWAA) pursuant to A.R.S. § 45-1972(B).

### 9.3 FUNDING

#### 9.3.1 Groundwater Withdrawal Fees

The WMAP is funded primarily from groundwater withdrawal fees levied and collected from each person withdrawing groundwater in an AMA from a non-exempt well (A.R.S. § 45-611(A)). Other sources of funding include one-half of the annual surcharge collected from persons holding a permit for interim groundwater use in bodies of water within the AMA, and application fees for underground storage facility permits, groundwater savings facility permits, water storage permits, and recovery well permits (A.R.S. § 45-133(E); A.R.S. § 45-871.01(A)).

No later than October 1 of each year, the Director must set the groundwater withdrawal fee for the following calendar year. A.R.S. § 45-614(A). Prior to setting the fee, the GUAC for the AMA recommends to the Director how the fee should be set within the statutory limit. Within 30 days after setting the fee, the Director is required to give written notice of the fee to all counties, cities, towns, private water companies, political subdivisions, and holders of groundwater withdrawal permits in the AMA (A.R.S. § 45-614(C)). The fee is required to be paid to ADWR at the time the person withdrawing the water files an annual water withdrawal and use report (annual report) pursuant to A.R.S. §§ 45-632, 45-614(E).

The total fund amount for each year is known by April, after the receipt of annual reports in March. Total available funding for the programs varies from year to year depending on the amount of groundwater withdrawn and any carry-over of funds from previous years.

**TABLE 9-1  
PINAL AMA ANNUAL WMAP  
WITHDRAWAL FEE<sup>1</sup> SUMMARY, 1997 - 2015**

Year	Groundwater Pumped (Acre-Feet)	Withdrawal Fee <sup>2</sup> (\$/acre-foot)	Monies Collected
1997	451,292	0.5	225,646
1998	354,790	0.5	177,395
1999	364,534	0.5	182,267
2000	414,932	0.5	207,466
2001	387,535	0.5	193,768
2002	477,985	0.25	119,496
2003	458,803	0.5	229,401
2004	488,912	0.5	244,456
2005	445,677	0.5	222,838
2006	503,106	0.5	251,553
2007	602,626	0.5	301,313
2008	574,918	0.5	287,459
2009	495,467	0.5	247,733
2010	487,543	0.5	243,771

Year	Groundwater Pumped (Acre-Feet)	Withdrawal Fee <sup>2</sup> (\$/acre-foot)	Monies Collected
2011	672,990	0.5	336,495
2012	646,468	0.5	323,234
2013	581,101	0.5	290,550
2014	547,110	0.5	273,555
2015	517,756	0.5	258,878

<sup>1</sup> Withdrawal fees and fees collected reflect only that portion of the groundwater withdrawal fee established to support the WMAP.

<sup>2</sup> The figures in the groundwater pumped column reflect the most recent information available in the AMA. This information may vary from the figures used at the time the groundwater withdrawal fees were actually collected.

All fees received by ADWR for the WMAP must be transmitted to the state treasurer (A.R.S. § 45-615). The state treasurer is required to hold the fees in a separate fund and to maintain within the fund separate accounts for each AMA (A.R.S. § 45-615(1)). Monies held in the fund for an AMA may be used only to finance the augmentation and conservation assistance programs for the AMA and to fund any projects that are authorized by the Director for monitoring and assessing water availability within the AMA (A.R.S. § 45-613(A)). Table 9-1 shows the total groundwater pumped, annual groundwater withdrawal fees, and total fees collected from 1997 through 2015.

## 9.4 HISTORY

### 9.4.1 Second Management Period

The assistance program originated during the second management period (1990 - 2000) as an augmentation program, including incentives for artificial recharge (A.R.S. § 45-565(A)(6)). A program for conservation assistance was required in 1990 (A.R.S. § 45-615(1)). In 1996, legislation authorized funding for monitoring and assessing water availability and land subsidence in addition to augmentation and conservation assistance (A.R.S. § 45-611). The addition of monitoring and assessing resulted in changing the name of the program from the “Conservation and Augmentation Fund” (as in the Second Management Plan) to the “Water Management Assistance Program” (as in the Third Management Plan).

During the second management period (1990 – 2000), the PAMA funded approximately \$700,000 in municipal, industrial and agricultural conservation programs. The majority of the funds expended for conservation assistance were used to assist the agricultural sector, reflecting the sector’s substantial contribution to the grants fund. Approximately \$200,000 funded augmentation programs, primarily to determine the feasibility of developing recharge facilities in the PAMA. The studies provided important information to the PCWAA and assisted it in developing partnership agreements with local irrigation districts and municipal providers to put Central Arizona Project (CAP) municipal water supplies to use. In addition, two reservoirs to store CAP water were constructed, thereby reducing the need for groundwater withdrawals when there is a reduction in CAP supplies. Descriptions of all funded projects can be found in Chapter 9 of the Third Management Plan (3MP).

(See <http://www.azwater.gov/AzDWR/WaterManagement/AMAs/ThirdManagementPlan3.htm>).

### 9.4.2 Third Management Period

The 3MP (2000-2010) required a program for “additional augmentation of the water supply of the AMA, if feasible, including incentives for artificial groundwater recharge” (A.R.S. §45-566(A)(6)) and a program for “conservation assistance to water users within the AMA” (A.R.S. § 45-566(A)(8)). During the third

management period, the WMAP program intended to focus on the following objectives:

- Providing planning and technical support for augmentation projects.
- Providing funds for monitoring and assessing groundwater conditions to facilitate effective development of a regional recharge plan.
- Supporting the development and implementation of a regional recharge plan to coordinate recharge of renewable water supplies and address groundwater problems in critical areas.
- Increasing public awareness of the importance of water supply augmentation.
- Providing funds for conservation projects for agricultural, municipal, and industrial water users and for information and education on water conservation.
- Providing planning and technical support for conservation projects.
- Act as a centralized source for information on water conservation.
- Increase public awareness of the importance of water conservation.

The process for applying for WMAP funds programs and projects changed during the third management period due to legislation enacted in 1999 (A.R.S. §§ 41-2701 through 41-2706). As a result, Chapter 9 was modified in 2003 to meet the requirements for soliciting and awarding grants as required by the new legislation. The legislation requires state agencies to follow specific procedures in soliciting and awarding grants, including: 1) publishing notice of a request for grant applications; 2) appointing at least three peers or other qualified individuals who are not members of the GUAC to evaluate the applications; and 3) keeping all information in the applications confidential until the grants are awarded.

Some of the projects that were funded with WMAP monies in the PAMA during the third management period include:

- Irrigation Management Services
- H2O Landscaping Education and Assistance Program
- Western Pinal County School Program
- Leak Detection Equipment
- AMWUA Water Awareness Month interactive website

## **9.5 NEEDS AND CHALLENGES FOR 4MP**

WMAP funds have varied with varying groundwater withdrawals in the PAMA. Increased pumping in the future would result in higher WMAP funds, but less progress towards the achievement of the PAMA goal of preserving existing agricultural economies in the AMA for as long as feasible while preserving future water supplies for non-irrigation purposes.

### **9.5.1 Future Needs Identified in the 3MP**

The following needs were identified; however, it was recognized that a major downturn in the regional agricultural economy would result in a sharp reduction in funds because agricultural water users contribute approximately 95 percent of the WMAP monies collected annually in the PAMA. It was also recognized that changes may occur in water use patterns, technological advances, social values, institutional constraints, and the economic feasibility of conservation or augmentation projects.

- Assistance in increasing utilization of renewable water supplies.
- Continued conservation assistance and education in all sectors.
- Irrigation water management assistance and funding for the installation of efficient irrigation systems and infrastructure to convey renewable water supplies to farms.
- Monitoring crop and water use patterns and evaluating the impact of market conditions and

regulatory programs on farming operations.

- Evaluating the effectiveness of conservation programs and funding education programs that have potential for resulting in significant long-term water savings.
- Developing opportunities in the industrial sector for the use of renewable water supplies, technical and planning support, and research on new water conservation technologies.
- More accurate information on groundwater movement, amounts of groundwater in storage, water levels, and decline rates.
- A comprehensive regional recharge plan to coordinate recharge activities and address groundwater problems in sub-AMA areas.

### **9.5.2 PAMA Water Demand and Supply Assessment 1985 - 2025**

The *Demand and Supply Assessment, Pinal Active Management Area* (Assessment) (ADWR, 2011) identified the following challenges:

1. Agriculture remains the dominant sector in PAMA.
2. Even with significant population growth, only a small amount of additional reclaimed water is generated under baseline assumptions.
3. When additional reclaimed water is put to use, overdraft is not reduced significantly in PAMA.

## **9.6 PROCEDURES**

The WMAP will continue to be implemented during the fourth management period. Following is a description of how projects are funded, identified, solicited, and awarded. A flow chart summarizes the process (*See Figure 9-1*).

### **9.6.1 Identifying Priority Projects**

In an effort to apply available funding and technical assistance to the most qualified projects, ADWR identifies priorities with assistance from members of the water-using community and the GUAC. Information may potentially be gathered in the following ways:

1. Soliciting public input at GUAC meetings from the GUAC and the public.
2. Soliciting ideas from conservation coordinators at the state level conservation information sharing meetings.
3. Meeting with technical administrators of currently funded projects to assess project progress and anticipate future needs.
4. Conducting surveys and/or requesting letters of intent so that stakeholders have the opportunity to put their ideas in writing.
5. Documenting expressions of interest and inquiries received via phone, email, or in person.
6. Meeting with appropriate water management staff to learn about agency needs, resources, and legal requirements relating to conservation in the industrial, municipal, municipal BMP, agricultural, and agricultural BMP programs.
7. Reviewing current focus areas of other funding agencies and/or meeting with grant coordinators (e.g. US Bureau of Reclamation) to identify needs, gaps, and/or areas for collaboration.

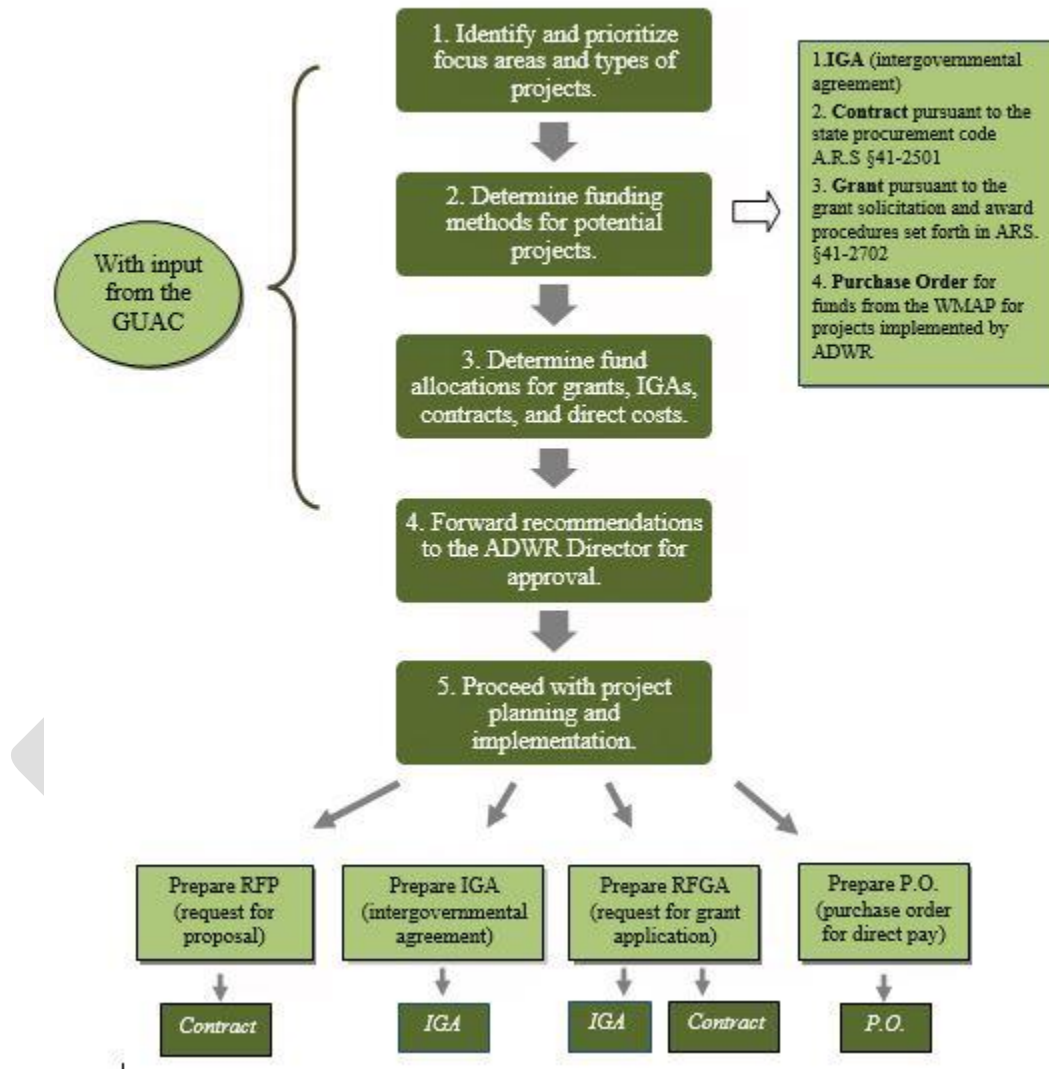
### **9.6.2 Applying Funds to WMAP Projects**

ADWR identifies priorities for program assistance with input from members of the GUAC and the water-using community. Recommendations are made to the Director about allocating funds among the program categories: conservation, augmentation, and monitoring hydrologic conditions or assessing water availability. The type of project or program to be funded determines whether one of the following four methods is used to apply funds: Inter-Governmental Agreement (IGA), contract, grant, and direct use by

ADWR.

**FIGURE 9-1  
WMAF PROCESS**

**Water Management Assistance Program (WMAF)  
Process for Funding Projects**



**A. Intergovernmental Agreement**

ADWR may enter into an IGA with public agencies (as defined in A.R.S. § 11-951) (A.R.S. § 45-105(A)(8)). IGAs are appropriate when the source of the service requested is limited, and the awards do not have to be competitive. The project must involve a joint exercise of powers common to the parties or an agreement for joint or cooperative action.

**B. Contract**

ADWR may enter into a contract for specific services by issuing a request for proposal (RFP). An RFP is

used for specific services or a narrow scope of work and where the lowest bid is not necessarily the winning bid (A.R.S. § 41-2534). An RFP is used for purposes of procuring a specific end product in the form of materials, services or construction.

### **C. Grant**

A grant process is used when selection requires a competitive process to be fair. It can be used for both governmental and non-governmental entities. The scope of the project should not be too specific as to single out only one or two possible entities and not too general so as to generate projects that do not meet project objectives. A.R.S. §41-2702 includes a set of requirements for the grants process including the following:

1. Preparation of a Request for Grant Application (RFGA) that includes scope, funding amount and evaluation criteria.
2. Confidentiality of applications until an award or awards are made; and
3. Evaluation by at least three evaluators. Note that GUAC members may not serve as evaluators, but can be involved in grant award selection.

### **D. Direct use by ADWR**

If a project is to be implemented by ADWR, it will use monies directly from the WMAP.

#### **9.6.3 Contract Development, Monitoring and Support**

Each person receiving monies for WMAP purposes through a grant, IGA or contract must enter into a contractual agreement with ADWR. Contracts, prepared by ADWR staff, describe what tasks are to be accomplished and set deadlines for task completion and fund disbursements. ADWR staff track progress and review deliverables for compliance with contract requirements. ADWR authorizes and issues payments, modifies contracts as needed, and provides other legal and administrative support.

#### **9.6.4 ADWR's Role in the WMAP**

Fund management and administration of grants and contracts are coordinated between ADWR's Administration Division and the AMA staff. The Administrative Division's functions include management of the separate funds for each AMA and contract administration. The following responsibilities may be assigned to ADWR staff:

1. Prioritize, review, and provide input on submitted proposals, and identify areas of need for future project proposals.
2. Analyze potential projects and identify appropriate funding methods (grant, IGA, procurement contract).
3. Administer IGAs, contracts, and grants.
4. Implement ADWR projects.
5. Provide technical and field assistance.
6. Provide information and educational services. ADWR staff develops water conservation information materials, educational curricula and displays, and programs specific to water users within the AMAs. These materials and programs may be developed independently, with WMAP funding, or through partnerships with other government agencies, community groups or utilities. ADWR staff also maintains web-based or hard copy inventories of information and educational materials for distribution to water users, and provide water-related presentations to civic groups, schools and others.

#### **9.6.5 GUAC Role in the WMAP**

The GUAC advises the AMA Director, makes recommendations on groundwater management programs and policies for the AMA, and submits comments to the AMA Director and to the Director on draft management plans. A.R.S. § 45-421. The following list describes the GUAC's role in the WMAP:



1. Provide recommendations regarding withdrawal fees.
2. Provide input and recommendations about the goals and priority focus areas for the PAMA.
3. Assist ADWR in selecting general project ideas for funding prior to the solicitation of applications or proposals.
4. Allow public input and comment on potential projects at meetings.
5. Identify sets of criteria for evaluating proposals and contracts.
6. In coordination with ADWR, participate in selecting evaluators for grants.

#### **9.6.6 Criteria Used to Evaluate Projects**

Specific sets of criteria are needed when developing RFGAs or RFPs. These criteria are established by ADWR with assistance from the GUAC. Certain criteria may be given greater weight, and any weighted system must be applied consistently. Following is a list of criteria to be considered:

1. Does the project support augmentation of the water supply of the AMA; provide conservation assistance to water users with the AMA; and/or support monitoring and assessing water availability within the AMA?
2. Is the project consistent with ADWR policies and programs, and the management goal of the AMA?
3. Does the project benefit multiple water users or stakeholders? Is there community and/or sector support for the project?
4. Is there the potential to leverage the project with other proposed or ongoing projects? Are there cost-sharing opportunities with applicant or other parties? Would the project be otherwise implemented without WMAP funding?
5. Can the effectiveness of the project be measured? Examples of metrics might include comparing pre-project water use and post-project water savings; scientific data collections and reporting methods; or pre-program and post-program surveys to verify project results.
6. If the project is a continuation of ongoing activities, has the project been shown to be effective? If a new project, is the proposed work duplicative of work that has previously been performed?
7. Is the project proposal complete? In particular, proposals should include:
  - o Clear statement of purpose, goals, methodology, and list of deliverables (data collection, interim and final reports, etc.) and
  - o Detailed project budget, including salary costs and benefits, retrofit device costs, equipment/supply purchases, etc.

## **Bibliography**

ADWR. (2011). *Demand and Supply Assessment, Pinal Active Management Area*. Phoenix: ADWR.